



# Helenium HayDay™

syngenta *flowers*

## Culture Guide

**Botanical name:** *Helenium autumnale*

**Product form:** Vegetative

**Containers:** Quarts, Gallons

**Habit:** Upright

**Vernalization:** Not required (First Year Flowering)

### Garden Specifications

**Garden Height:** 14–18" (35–45 cm) tall

**Garden Width:** 14–18" (35–45 cm) wide

**Exposure:** Full sun

**USDA zone:** 5–9

**AHS zone:** 9–5

**Product use:** Containers, Landscapes

### Propagation of Unrooted Cuttings

**Root emergence:** 5–7 days

**Rooting hormone:** Not Recommended

**Bottom heat temp.:** 70–72 °F (21–22 °C) for the first three weeks. After roots are well developed, temperatures can be lowered to hold and tone the cuttings.

**Misting:** Mist schedules vary depending on light and temperature conditions. Apply just enough moisture to rehydrate the cuttings and keep them from wilting. Cuttings should be hydrated and in a non-wilted stage within 24 hours after sticking. Cuttings that continue to wilt heavily after 24 hours will callus unevenly and will be delayed in rooting. CapSil® (spray adjuvant) can be sprayed on the cuttings at a rate of 2–4 oz/100 gal within 1–2 days after sticking to help in rehydration of the cuttings. Misting should be significantly reduced after 3–4 days and after cuttings become fully hydrated.

**Rec. tray size:** 105-cell (30 mm) or larger

**Propagation timing:** 6–7 weeks for a 105-cell plug; add more rooting time for significantly larger plug sizes.

### **Temperature**

**Day:** 72–74 °F (22–23 °C)

**Night:** 68–70 °F (20–21 °C)

### **Lighting**

**Day extension lighting:** Beneficial to 14 hours

**Light intensity:** 200–250  $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$  for the first two weeks after sticking or until root development occurs. Light levels can be increased up to 600  $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$  as rooting increases and the cutting matures.



HayDay™ Golden Bicolor

**Day length response:** Obligate long day

**Daily light integral:** 4–6  $\text{mol}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$  for the first two weeks after sticking or until root development occurs. DLI can be increased to greater than 12  $\text{mol}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$  after root formation.

**Media pH:** 5.8–6.2

**Media EC:** SME EC: 0.9–1.3 mS/cm, PourThru EC: 1.4–2.0 mS/cm

**Fertilizer:** Begin fertilization at 75 ppm nitrogen when roots become visible. Rates can be increased up to 100 ppm nitrogen after roots become well developed. Use primarily Cal-Mag® Plus (calcium nitrate + magnesium nitrate + iron) fertilizers in propagation to prevent unwanted stretch.

**Pinching:** Recommended

**Plant growth regulators (PGRs):** Not necessary

### Bulking and Vernalization

**Vernalization:** Not required (First Year Flowering)

### Finishing

#### **Temperature**

**Day:** 78–80 °F (26–27 °C)

**Night:** 64–66 °F (18–19 °C)

**Average daily temperature:** 70 °F (21 °C)

#### **Lighting**

**Day extension lighting:** Necessary to 14 hours

**Light intensity:** 1,200–1,600  $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$

**Day length response:** Obligate long day

**Daily light integral:** 16–18  $\text{mol}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$

**Transplanting:** Transplant directly into the finished container. Plant to a depth where the top of the rooting media is slightly above the level of media in the container. Make sure that the root ball is covered and that the plug is situated in the center of the pot.

**Media pH:** 5.8–6.2

**Media EC:** SME EC: 1.5–2.1 mS/cm, PourThru EC: 2.3–3.2 mS/cm

**Fertilizer:** 200–250 ppm N

**Pinching:** Yes, one pinch is recommended either in propagation or 7–10 days after transplant.

**Plant growth regulators (PGRs):** If crop timing is correct, then PGRs are typically not necessary. If needed B-Nine® WSG spray at 2,500 ppm should be sufficient.

**Tech tip:** Helenium is an obligate long day plant. Helenium will not flower under short days. Day length extension lighting, or night interruption lighting is necessary for flowering under naturally short day lengths. Light the crop with a minimum day length of 14 hours and an average light intensity of 1,200–1,600  $\mu\text{mol}\cdot\text{m}^{-2}\cdot\text{s}^{-1}$ .



Try Chrysal Alesco®, a postharvest foliar spray, to protect ethylene sensitive crops during shipping and retail.

**Moisture level:** Media should be allowed to dry between irrigations. Alternate between moisture level 3 and 4.

**3 - MOIST:** Soil is brown in color, strongly squeezing the soil will extract a few drops of water, and trays are light with no visible bend.

**4 - WET:** Soil is dark brown but not shiny, no free water is seen at the surface of the soil, when pressed or squeezed water drips easily, and trays are heavy with a visible bend in the middle.

**Common pests:** Aphids, Leafhoppers, Leafminers, Spider Mites

**Common diseases:** Powdery Mildew

## Scheduling

Size	Crop Time	Plants Per Pot
1.25 to 2.5 quart (5.5 to 6.5 inch, trade gallon)	10–12 weeks	1 ppp
3.0 quart to 2.0 gallon (7.5 to 10 inch)	10–12 weeks	2–3 ppp

Estimated finish crop time is from transplant of a 105-cell tray and finished at an average daily temperature (ADT) of 70 °F (21 °C).

## Example crop schedule for a 2.5 quart

Weeks From Transplant	Description
1 week	Plant one pinched liner in the center of a 2.5-quart pot. (Please refer to the tech tip if starting plants under short days)
8 weeks	If necessary, start to apply plant growth regulators (PGRs) to control height
12 weeks	Finish



HayDay™ Golden Bicolor